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MAY 1945

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture
Subscription price, 50 cents per year; single copy, 5 cents; foreign price, 70 cents; payable in cash or money
order to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.
VOLUME 29 - NUMBER 5 - WASHINGTON, D. C.



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WITH Germany's defeat and with greater intensity of the war in the Pacific, the need for top production by American farmers becomes even greater than before. Near starvation throughout large areas of Europe makes it imperative that at least the minimum amount of food to sustain life be provided promptly if disease, riots, and other havoc are to be avoided. * * * Meat production for 1945 is now expected to be only 22½ billion pounds, down 9 percent from 1944 output. The economic Stabilization Director announced a comprehensive meat program in an attempt to effect better geographical distribution of current and future supplies, and to encourage increased production. Slaughter quotas are being set for nonfederally inspected packing plants and for farm meat sales, to channel more livestock into federally inspected plants—which can make interstate shipments—and more plants are being urged to take Federal inspection. The scheduled midyear reduction of 50 cents in live cattle ceilings has been canceled to encourage continued cattle feeding. * * * In addition to this program, the WFA-announced 50-cent increase in support prices for hogs through August 1946—with heavier hogs, up to 300 pounds, included—is hoped to bring about an 18-percent increase over last year in this fall's pig crop.

FAO TO BE ESTABLISHED

THE House of Representatives on April 30 approved the joint resolution authorizing United States participation in the Food and Agriculture Organization of the United Nations and sent the resolution to the Senate for consideration. This action is significant because FAO is the first permanent peace organization to achieve United Nations approval during the war.

Growing out of the Hot Springs conference two years ago and of the work of an Interim Commission since then, the constitution and purposes of FAO have been worked out and accepted by the required number of nations necessary for its establishment. It is expected that FAO will be formally set up this fall.

What FAO is and what it proposes to do was well summarized by President Roosevelt, on March 26, 1945, in his last message to Congress when he urged United States participation. Here is the heart of that message:

"The United Nations have already made much progress in setting up an organization for international security. But our collaboration for peace must be on a broader basis than security alone. We must strive to correct the conditions that predispose people toward war or make them the ready tools and victims of aggressors. We shall need also to work together as nations toward achieving freedom from want. Our participation in the Food and Agriculture Organization will be an essential step in this collaboration.

"The organization will seek its ends through the provision of international services in agriculture and nutrition which have heretofore been either lacking or inadequate. Among other things, it will provide the means for bringing together from all parts of the world the results of research in all the fields of agriculture and nutrition and for disseminating ideas and advice on how the available information can be of greatest usefulness.

"Improved standards of nutrition, increased levels of farm in-

comes, avoidance of agricultural surpluses—these are among the important objectives that the Food and Agriculture Organization will assist the nations of the world in achieving. The Organization will seek to better conditions in food and agriculture by fostering international cooperation in developing the optimum use of the resources of land, labor, and science. One of its important jobs will be to help in improving the marketing of agricultural products throughout the world so that farmers can find good markets here and abroad and continue to produce as fully as is consistent with sound conservation practices.

"The constitution of the organization provides that it shall include fisheries and forests within the scope of its work, and that in agriculture it shall cover both food and nonfood products. The work of the Food and Agriculture Organization will be primarily technical and advisory. Its staff will be small; its budget will be small, \$2,500,000 for the first year—with \$625,000 as the share to be borne by the United States—and about twice that amount in succeeding years. It is in no sense a relief organization.

"In becoming a member of the Food and Agriculture Organization, we will retain complete freedom of action in determining our national agriculture policies. Under its constitution the Organization will have no powers of direction or control over any nation. It will recommend agricultural policies and advise nations on their food and agricultural problems, but it will have no power to coerce or command. The constitution provides that all member nations shall have equal representation in the conference of the Organization, each being entitled to one vote. Our responsibilities in joining the Organization are of the same nature as those Congress has heretofore authorized in approving our participation in the Pan American Union."

— Editor

Commodity Reviews

LIVESTOCK

PRIMARY features of an integrated meat program, recently announced by the Economic Stabilization Director in collaboration with War Food Administration, Office of Price Administration and the War Department, include:

(1) Cattle feeding will be encouraged by continuing the present over-all ceiling on live cattle and calves through the remainder of the year—a 50-cent reduction was to have taken place on July 1.

(2) OPA will set quotas on the output of non-federally inspected slaughterers, based on meat production in corresponding periods of 1944 and on the number of ration points surrendered to OPA. Meat sales by farmers will be controlled through the issuance of sales permits for farm butchered meat, based largely on the quantity of meat sold in 1944 and on the ration points collected. These actions are designed to channel more livestock into federally inspected plants and stimulate a more equitable geographical distribution of meat by increasing the quantity that can move in interstate shipment to deficit meat-producing areas. Non-federally inspected meat cannot legally be shipped across State lines.

(3) To relieve the squeeze on packer margins the prices on beef sold to Government agencies will be increased, payment rates to cattle slaughterers in connection with the price control program will be increased, and ceiling prices on pork products or slaughter payments to hog slaughterers or both will be adjusted. Under a special adjustment provision no slaughterer who operated profitably in 1938-41 will be compelled to discontinue operations because of wartime conditions.

(4) Non-federally inspected packing plants will be urged to apply for Federal inspection to make more meat available for interstate shipment to

increase the civilian supply in meat deficit areas, and for Government procurement agencies.

(5) A coordinated rigorous enforcement campaign will be waged against black market operations in meat.

A 50-cent per 100-pound increase in the support price for hogs was announced on April 11 to encourage hog production. Through August 1946 the new support price will be on the basis of a Chicago price of \$13 for good and choice butcher hogs of all weights up to 300 pounds. The Government has assured farmers that there will be no reduction in the present ceiling prices for hogs before November 1, 1946.

The national goal set for the fall pig crop of 37 million head is 18 percent larger than the 1944 fall crop. A large fall pig crop is desirable because a substantial increase in feed grain reserves is in prospect along with a continued strong demand for pork.

The number of cattle on feed April 1 in 11 Corn Belt States was estimated to be 8 percent greater than a year earlier, but was less than for that date in any other year since 1940.

Despite a record high slaughter of sheep and lambs in the first 4 months of this year, slaughter during the last 8 months probably will be less than a year earlier.

With a reduced over-all meat supply in 1945 and an exceedingly strong demand for meat, prices for meat animals throughout the summer and early fall probably will continue at or near present high levels. Average prices received by farmers in 1945 will be higher than in 1944.

WHEAT

A JULY 1, 1945, wheat carry-over of 350 to 375 million bushels appears probable, on the basis of current estimates of disappearance. This compares with 316 million bushels a year earlier and 235 million bushels for the 10-year (1932-41) prewar average.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio ¹
1935-39 average.....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	192	162	119
1944.....	195	170	115
1944			
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116
March.....	198	173	114
April.....	203	173	117

¹ Ratio of prices received by farmers to prices paid, interest and taxes.

A carry-over of this size would be sharply below the 632 million bushels in 1942 and the 622 million in 1943.

Export demand which includes lend-lease, civilian relief feeding as well as commercial exports, is heavy. However, because of the difficulties involved in obtaining cars to move grain to ports, it is difficult to estimate the quantity which will actually be exported before July 1.

A winter wheat crop of 863 million bushels is indicated on the basis of April 1 condition. A crop of this size would be nearly 100 million bushels above that of last year and 37 million bushels above the largest previous winter wheat crop, produced in 1931. The reported condition of wheat is the highest since 1919, and the growth is 2 to 3 weeks ahead of normal.

There will be no official spring wheat crop indication until June 11. But moisture conditions are favorable for seeding spring wheat, and if spring yields should turn out about average, the total wheat crop would exceed last year's record 1,079 million bushels.

A crop in excess of a billion bushels would undoubtedly result in a larger carry-over on July 1, 1946, than on July 1, 1945, even with large-scale exports and continued relatively large domestic disappearance.

Current wheat prices are generally at ceiling levels and the highest in 20 years. Ordinarily, prices start downward in May, in an adjustment to the new crop basis. The adjustment this year may be less marked, however, as a result of large flour purchases by the Government, a good demand for wheat for industrial alcohol production, heavy exports, and the restricted movement caused by a shortage of cars. A very large 1945 crop probably would lower prices in 1945-46 compared with 1944-45, but with good demand in prospect, prices may be expected to continue at relatively high levels.

FEED

LARGE quantities of corn and oats were consumed by livestock and otherwise utilized during the January-March quarter of 1945. Domestic disappearance of corn during the 3-month period totaled about 800 million bushels, the largest January-March disappearance in at least 20 years, except for 1943 and 1944. Disappearance of 340 million bushels of oats during the same period also was the largest for the quarter in at least 20 years, except for 1943. Disappearance of 59 million bushels of barley during January-March, on the other hand, was 18 percent smaller than in the first quarter of 1944, and smaller than in other years for which data are available.

Stocks of 1,361 million bushels of corn, 439 million bushels of oats, and 109 million bushels of barley on farms, at terminal markets, and owned by the Government on April 1 totaled 47.7 million tons, about 19 percent more than on April 1, 1944, and about equal to the average for the 5 preceding years, when stocks were comparatively large. Stocks of corn were 23

percent larger than a year earlier, stocks of oats were 4 percent larger, and barley stocks were about 5 percent larger than a year earlier.

Carry-over stocks of oats and barley on July 1 probably will be somewhat larger than a year earlier. Carry-over of corn next October 1 may amount to about 450 to 500 million bushels, or more than double the carry-over of 215 million bushels on October 1, 1944.

POULTRY AND EGGS

WHOLESALE and retail prices for poultry are expected to be at ceilings for the next few months. And prices received by farmers for chickens in 1945 are expected to be somewhat higher than in 1944 because of the 1½-cent increase in the ceilings for young chickens authorized by the Economic Stabilization Director, effective July 1.

Because of reduced supplies of red meat and large military requirements, the strong civilian demand will exceed

the supply of poultry meat by a wide margin. Poultry supplies for 1945 probably will be less than last year despite an expected increase in broiler production. Decreases in farm chickens sources will more than offset the broiler increase.

For 1944, total chicken meat supply (dressed weight) was 3,460 million pounds, 346 million pounds below the 1943 record but otherwise the highest ever reported.

Throughout most of 1945, prices received by farmers for eggs are expected to continue moderately above 1944. A strong civilian demand, primarily because of reduced supplies of other foods, will tend to keep wholesale and retail egg prices at ceiling levels. However, civilians are expected to receive more eggs in 1945 than in 1944, primarily because of the decline in procurement of new dried egg supplies for lend-lease purposes. For the first quarter of 1945 egg production was 7 percent below 1944.

The demand for baby chicks ex-

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		April 15, 1944	March 15, 1945	April 15, 1945	Parity price April 15, 1945
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.47	1.48	1.49	1.53
Corn (bushel).....do.....	.642	.691	1.15	1.07	1.07	1.11
Oats (bushel).....do.....	.399	.340	.794	.740	.710	.690
Rice (bushel).....do.....	.813	.742	1.87	1.78	1.77	1.41
Cotton (pound).....cents..	12.4	10.34	20.24	20.24	20.20	21.45
Potatoes (bushel).....dollars..	.697	.717	1.35	1.71	1.74	1.25
Hay (ton).....do.....	11.87	8.87	16.20	18.10	16.90	20.50
Soybeans (bushel).....do.....	7.96	.954	1.91	2.13	2.13	1.66
Peanuts (pound).....cents..	4.8	3.55	7.63	8.20	8.24	8.30
Apples (bushel).....dollars..	.96	.90	3.17	2.54	2.53	1.66
Oranges, on tree, per box.....do.....	4.81	1.11	2.20	2.36	2.54	2.03
Hogs (hundredweight).....do.....	7.27	8.38	13.00	14.00	14.10	12.60
Beef cattle (hundredweight).....do.....	5.42	6.56	12.10	12.30	12.70	9.38
Veal calves (hundredweight).....do.....	6.75	7.80	13.10	13.70	14.00	11.70
Lambs (hundredweight).....do.....	5.88	7.79	13.60	13.80	13.90	10.20
Butterfat (pound).....cents..	26.3	29.1	50.9	50.7	50.5	45.0
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.18	3.22	3.14	2.60
Chickens (pound).....cents..	11.4	14.9	23.7	25.0	25.7	19.7
Eggs (dozen).....do.....	21.5	21.7	27.1	33.1	33.0	31.22
Wool (pound).....do.....	18.3	23.8	41.6	39.9	40.4	31.7

¹ Revised.

² Comparable base price, August 1900-July 1914.

³ Comparable price computed under sec. 3 (b) Price Control Act.

⁴ Comparable base price, August 1919-July 1929.

⁵ Does not include dairy production payments made directly to farmers by county AAA offices.

⁶ Adjusted for seasonality.

ceeded supplies during March, reflecting the favorable egg price situation. Hatcheries were unable to fill all orders because of the shortages of suitable hatching eggs. During March the output of commercial hatcheries was 9 percent less than 1944. However, a late hatch is expected similar to that in 1943 when 17 percent of the total commercial hatch took place in June and July, compared with the 7 percent usual hatching during those two months.

DAIRY PRODUCTS

THE proposed dairy production payment rates for April 1945 through March 1946, recently announced by War Food Administration are designed to encourage the production of more butter than has been produced in recent years. These rates place farmers delivering cream in about as favorable position as those delivering whole milk. This should tend to increase milk production in butter-producing areas and probably check further diversion of cream to whole milk deliveries.

Rates of payment for whole milk will be a little above the previous 12-month period, but butterfat payments will be substantially higher. Butterfat rates in 1944 averaged about 8 cents per pound compared with the proposed rates averaging about 13 cents per pound.

This year cash receipts to farmers for dairy products are expected to be the same as in 1944, but because of larger production payments incomes may be substantially higher. Also, milk-feed and butterfat-feed price ratios will probably continue above 1944.

FATS AND OILS

PRICES of most fats and oils will continue at ceiling levels through 1945 and into 1946, unless the war in the Far East ends in the next few months and the supply situation is not likely to be materially eased before mid-1946.

By that time lard and grease production (from 1945 fall pigs) is expected to be at a higher level than in 1945, and some copra may be forthcoming from the Far East.

Inventories of fats and oils are being materially reduced during the current crop year due to large war needs, and by October 1 may be the smallest on record in relation to needs.

The shortage of fats and oils necessitated recent orders reducing their use in the manufacture of shortening, soap, salad and cooking oils, paint, linoleum and oilcloth. Civilian supplies of food fats and oils for 1945 may be 10 to 15 percent less than the 45 pounds per capita consumed in 1944. Use of drying oils in civilian goods (such as paint and linoleum) may be 30 to 40 percent below last year, while fat supplies for civilian soap probably will be about 10 percent less.

Farmers' intentions on March 1 indicated slight decreases in 1945 in soybean and peanut acreage. On the basis of these indications and average growing conditions, no major change would be expected in output of soybean and peanut oils in the 1945-46 season.

Linseed oil production from domestic flaxseed would be only slightly larger in 1945-46 than a year earlier, despite the likelihood of a material increase in the 1945 flaxseed crop, because stocks of flaxseed on hand at the beginning of the 1945-46 season will be much smaller than a year earlier.

FRUIT

WITH the advance of the spring season, new-crop deciduous fruits will become available in increasing quantities. Supplies of fresh strawberries will reach a peak in May, and cherries, peaches, apricots, and plums should become available in substantial volume by mid-June. It is unlikely that the cherry, peach, and apricot crops will be as large as the very large crops of last year. Prospective production of deciduous fruits in the Eastern States was reduced somewhat

by the severe freeze of early April, but a large production still is expected.

Although new-crop deciduous fruits will become available in increasing quantities this spring, they are not likely to surpass citrus fruits until late June or early July. Then, too, storage apples from the 1944 crop are expected to be of considerable importance until late spring. Supplies of oranges and lemons are expected to remain plentiful all spring, but supplies of grapefruit will continue to decline seasonally.

Above-normal quantities of eastern apples were carried into the spring season. To aid in the disposal of such apples, the War Food Administration purchased substantial quantities for utilization in the school lunch program and in charitable institutions.

Prices for fresh fruits the past month have been generally at ceiling levels, except for eastern apples.

TRUCK CROPS

TRUCK crops have developed 1 to 3 weeks earlier than usual along the Atlantic coast from Georgia to New Jersey and about 2 weeks earlier than usual in Texas. On the other hand, delayed growth and planting have resulted from excessive rain in Louisiana, Arkansas, Alabama, and Tennessee, and from cool weather and intermittent rains in California.

While the prospects for total vegetable production this year are still favorable, locally important developments have altered the usual pattern of movement of vegetables to market. Prolonged hot, dry weather in southern Florida has seriously curtailed production of snap beans, cucumbers, potatoes, and tomatoes while northern Florida has not had enough rain. However, supplies of truck crops on the fresh market in May are expected to be equal to or larger than supplies at the same time last year for all important crops except asparagus, cauliflower, new crop onions, and spinach.

Market prices for most truck crops have moved up from their declines of

late winter and probably will show considerable strength throughout May. However, seasonal declines in price are expected for the majority of the fresh vegetables this summer, and may reach their lowest point in September.

Prospects at this time are reasonably favorable for an adequate production of snap beans and sweet corn for processing. With only average loss of acreage planted, and with 10-year (1934-43) average yields per acre, the planting of acreages indicated by the April 1 intentions of processors would result in 1945 crops for processing larger than in 1944 by 7 percent for snap beans and by about 18 percent for sweet corn. Farmers are being encouraged to meet the processing-crop acreage goals for snap beans, sweet corn, green peas, and tomatoes by the maintenance of support prices as high as last year.

POTATOES

MOVEMENT of 1944 crop potatoes out of storage this past winter was hampered by adverse weather conditions and car shortages. While that situation plus Government procurement activity created an acute temporary scarcity of potatoes for civilians, it also served to extend available supplies beyond the time they otherwise would have become exhausted. While inland and Western areas of the country still lack adequate supplies, the major cities in Eastern States have been able to get moderate supplies which have moved generally at ceiling prices.

New potatoes have not provided as much relief to the short supply situation as was hoped earlier. While shipments were available from some of the Southern and Southeastern States about 2 weeks earlier than usual, frosts and cold, wet weather checked crop growth in California.

When new potatoes become available in sufficient volume, perhaps before the end of May, market prices of both old-stock and new potatoes are expected to recede from their current ceiling levels.

A 1945 potato crop slightly larger than the 379 million-bushel crop of 1944 is in prospect, based upon intended acreages of farmers and average growing conditions. In contrast, a sweetpotato crop considerably smaller than last year's 71 million-bushel one now seems likely.

COTTON

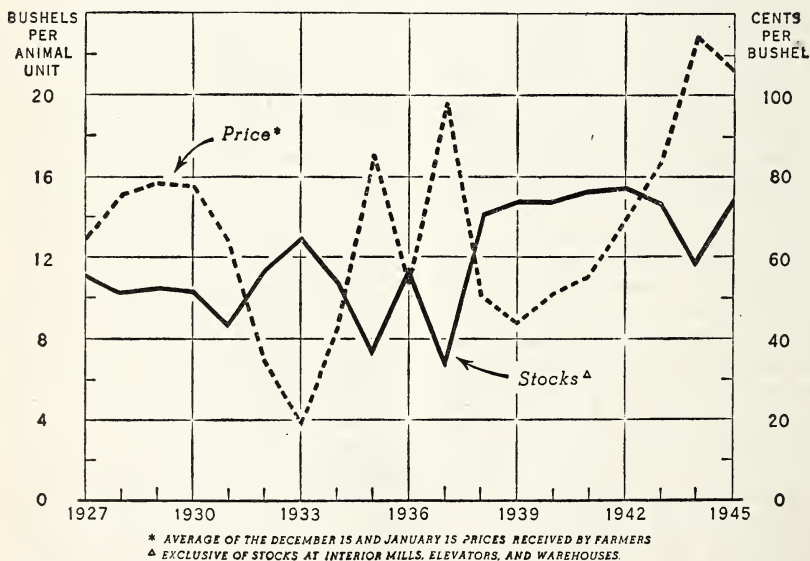
DURING April the International Cotton Advisory Committee held its fourth meeting in Washington. The last previous meeting was in April 1941. The 10 member producing areas represented were Brazil, British Exporting Colonies, Egypt, French Exporting Colonies, India, Mexico, Peru, Turkey, Union of Soviet Socialist Republics, and United States.

During this meeting the Committee went on record as finding "that a burdensome world surplus of cotton exists" and that "an effort should be made to solve the problem of surplus

stocks and of surplus production by international collaboration."

As a means of pursuing the problem further, the Committee recommended to the Governments of Brazil, Egypt, France, India, United Kingdom, and United States that they appoint within one month representatives to serve as a special study group, said group "as soon as appointed, organize and begin work on a report to be presented to the Governments represented on the International Cotton Advisory Committee within three months of the date of the first meeting of the study group, the report to include definite proposals for international collaboration." It was also recommended "that as soon as practicable after the submission of the report of the study group to the Governments represented on the International Cotton Advisory Committee, the Committee be convened to consider the report and take such action on it as may be deemed to be appropriate."

CORN: AVERAGE PRICE RECEIVED BY FARMERS, AND STOCKS PER ANIMAL UNIT, UNITED STATES, JANUARY 1, 1927-45



Fish Production Outlook for 1945

THE year 1945 has brought the greatest market demand for fish the industry has witnessed since the beginning of the war. This is easily understood: The growing scarcity of other protein foods—meats, poultry, dairy products. As a result, the fisheries, which have been hard at work during the 3½ years of war supplying not only food but a variety of essential byproducts, are now being called on to produce even more heavily to make up the lack of other foods on American dinner tables.

Will the industry be able to meet the demand? An honest answer to the question would be "yes, and no." There will be more fresh fish, barring unforeseen interruptions to production, than in several years. But there will be a smaller pack of canned fish than last year, and of this reduced pack the civilian will get an even smaller percentage. Fish meal for animal feeds will be short. So will fish oils for animal feeding and for industrial uses. Thus the over-all production in 1945 should be the largest since the war began, even though there will be distinct shortages in several classes of fishery products.

Peak Season Summer-Fall

While it is possible to predict the year's catch with fair accuracy, it is not actually known how production is running until September or October. This is because the fisheries are relatively inactive during the early months of the year, when winter weather makes operations difficult in many areas. Fishing picks up in the spring, reaches a peak in the summer and early fall, tapers off again toward the end of the year.

The bulk of production in the New England fisheries, which supply the greater part of the Nation's fresh fish markets, comes in the summer, although these fisheries actually operate throughout the year, in all kinds of

weather. The salmon catch, second largest among all the Nation's fisheries, is made in the summer and early fall, when the salmon are running in the rivers of Alaska and the Northwestern States. Largest catches of pilchards or Pacific sardines—the nation's top-ranking fishery in terms of yield—are made in the fall and early winter off the California coast.

4-Billion Pound Output

In normal times the fishing industry brings to market about 4.4 billion pounds of fish, taken all the way from Nova Scotia to the Gulf of Mexico and from Western Alaska to the waters off Ecuador. In 1942, because of the difficult conditions of wartime operation, the catch declined to 3.7 billion pounds. In 1943 the industry was able to increase its production to 4.0 billion, and last year it did still better, 4.4 billion pounds. Total production in 1945 should be about normal, although this does not mean "normal" production of all classes of fishery products.

Normally, about a third of the industry's total catch, or some 1.5 billion pounds, goes into cans. The chief canned fish industries are those for salmon, sardines, tuna, and mackerel. Another 1.1 billion pounds is sold in the fresh or frozen state. A small amount—some 150 million pounds—is cured. The largest single item, however, is the quantity made into meal, oil, and other byproducts—1.6 billion pounds.

Fish meal is one of the principal protein feeds for hogs and poultry; liver oils, as is well known, play an important role in the nutrition of human beings and livestock; other fish oils serve a long list of useful purposes in industry and art. Miscellaneous byproducts include crushed shells for poultry feeding and road construction, pearl essence, buttons and various ornamental objects.

The fishing industry was directly and immediately affected by the war. Only by constant effort on the part of the industry and the governmental agencies related to it has it been possible to maintain production at anything approaching normal levels.

About 95 percent of the total fishery production comes from the oceans and coastal rivers—from areas which were, in a sense, war zones from the very beginning of hostilities. Necessary security regulations placed hampering restrictions on the movements of fishing vessels. Mine fields had to be laid, or target areas located, in some of the best coastal fishing waters. Active submarine warfare invaded the fishing grounds of both coasts.

Acute Shortages Handicap Industry

The greatest single blow to the fishing industry was the requisitioning of about 700 vessels by the Army and Navy for military service immediately after Pearl Harbor. These included many of the industry's fastest, most productive boats. The loss temporarily placed severe handicaps on the salmon, tuna, pilchard, menhaden, and New England vessel fisheries, which yield the bulk of the industry's production. Only within the past year have enough boats been returned, or been replaced by new construction, to restore the fleet to approximately its prewar catching capacity.

Shortages of gear and operating equipment have also held down fish production. For many months, netting was critically short. For many types of camouflage, fish nets are considered the best material in the world. The output of most of the principal netting manufacturers, therefore, has been diverted to camouflage uses. It has required the most careful planning and scheduling, and much patching and mending of old nets, to keep enough on hand for the fishing boats. Manila, the cordage best suited to marine operations, was another war casualty—the source of supply was shut off when the Japanese occupied the Philippines.

The shortage of men, both on fishing boats and in the shore plants that process fish, has been troublesome throughout the war. It is growing more acute. For the most part, only absolutely irreplaceable men, such as captains and mates, have been granted deferment. It has been impossible to keep enough men in the processing plants to handle the fish as they come in.

The fact that the fleets have been largely restored to their prewar size, while the general manpower situation grows more acute, is the key to the present fish situation. With the boats back, the industry is able to bring in the fish needed. But with manpower critically short, especially in the shore plants that process the fish, it is not possible to put as many fish into cans, to fillet and package as many fish, or to process as many into meal and oil, as the industry would like to. This explains the prediction of an abundance of fish for the fresh fish markets—fish sold as they are received from the boats, with little or no further processing. It explains why the fish products that result from a more or less elaborate manufacturing process will be relatively scarce.

1945 Output Up Thus Far

The general trend of fish production during the early months of 1945 has borne out this expectation. For the first quarter of 1945, the New England catch was about 21 percent larger than during the same period last year. Heavy landings should continue during the spring and summer months. This will mean plenty of haddock, cod, rosefish, flounders, hake, and whiting for normal demands. Many sections remote from the New England coast will find their food problems eased as a result of the larger catches in this area.

The 1945 fishing season in the big canned fish industries is not yet under way. But, regardless of the size of the pack, canned fish for civilians will be scarce. For the 1945 season, increased needs for the military services,

relief agencies, and other Government claimants have made it necessary to reserve 80 percent of the pack of sardines (both Pacific and Atlantic), Atlantic sea herring, mackerel, and salmon, leaving 20 percent for civilians.

Production of fish meal and fish oil will also fall short of the mark this year. The War Food Administration has asked for production of 265,000 tons, although this figure is considerably less than the actual need. Because of the shortage of workers in the reduction plants, actual output will probably be nearer 200,000 tons. The production of fish oil, manufactured as part of the same process, will be correspondingly low.

Postwar Outlook

Looking beyond 1945, and even further to the postwar period, important and significant developments are expected in the fisheries. American

per capita consumption of fish in pre-war days averaged only about 13.3 pounds, but varied widely from about 30 pounds in coastal cities to negligible quantities in many sections of the interior. Technical progress will change this. Quick freezing will revolutionize the marketing of fish as it has already done for fruits and vegetables. Fishing vessels will dress, freeze, and package fish at sea, arriving in port with a high quality product ready for market. Air transportation will carry ocean fish and shellfish to interior communities within a few hours' time.

Such advances—and many similar ones are already planned for the postwar period—will make the fishery resources of America more widely available to all citizens.

CHARLES E. JACKSON
Asst Deputy Coordinator of Fisheries
U. S. Department of the Interior

Insect Pest-Damage Prospects

THE present picture of pest damage this spring and summer is as usual a mixed picture—weather from now on, whether hot or cool, rainy or dry, is very likely to encourage some pests while reducing others. To the question, which pests will increase and what crops will be attacked, no clear-cut answer can be given, but the pest situation is potentially dangerous and bears watching. Decisions made now to get prepared against pest outbreaks may save many crops and reduce serious losses. Chances are that farmers may have more trouble and losses than usual from crop and livestock pests this season. Greater care will be required in many crop areas to combat the building up of pest outbreaks. At least that is what pest control experts are saying. Several reasons are given for these conclusions.

For one thing, the crop season begins with the highest potential for insect abundance and damage to certain crops in many years. Insect surveys conducted last Fall by Federal and State entomologists showed that unusually large populations of several serious crop pests went into hibernation. Observations this spring show that many, such as chinch bugs, boll weevil, codling moth, and screwworm begin this season with the largest overwintering population in many years. This is due to fall and winter weather favorable to survival until spring. Potentially, crop damage from many pests in 1945 can seriously imperil per acre yields and production goals. This potential threat of crop loss is made more real and urgent because of the ability of insects to multiply in enormous numbers following the early

development this spring, and, if weather continues favorable, to build up very rapidly in outbreak numbers.

In south Texas, screwworms are already increasing to threatening and destructive levels, and are now attacking cattle there. Generally warm weather will favor a northward spread in outbreak numbers.

Chinch bugs are now in small grains in greater abundance than in the outbreak year of 1934, when this pest caused losses of 30 million bushels of corn and over 28 million bushels loss of small grains. Due to the early spring, chinch bugs may mature so rapidly in small grains that they will be able to fly over all barriers in overwhelming numbers into the young succulent corn. Of course, driving rains just when young chinch bugs are emerging in May or early June might destroy many of them and reduce injury to corn. Not relying on this off-chance of adverse weather, Congress has appropriated over a million dollars to help combat chinch bug migration to corn fields.

Many Pests Early This Year

Continued warm weather, too, during the spring and summer would favor the destructive Mexican bean beetle, European corn borer, grasshoppers, codling moth, and various aphids. The codling moth, now emerging 2 weeks early, may have a long season. In some regions the moths may produce one more generation than normal, late in the season. As a result, the worms may be excessively abundant before harvesting time, increasing apple losses. In areas where cold weather has decreased the apple crop, relative insect losses may be even greater this year, for there may be more apple worms per apple.

The potato leafhopper has already caused major bean crop losses in the South, partly because of lack of labor for control measures: This pest may now migrate out of the South earlier this year, so that bean and potato

crops may be seriously attacked earlier than usual.

The pea aphid is building up in larger numbers than usual in alfalfa and clover; it may move to the pea fields earlier this season, causing great damage when pea crops are most vulnerable to insect attack.

It is of course true, that unfavorable cool or rainy weather, particularly in April or May, may stop increases in many crop pests, in some cases for the entire season. Grasshoppers may be practically wiped out by heavy rains and cool weather at certain times. This is true of other cereal and forage pests, if the adverse weather happens to come when eggs are hatching, or when the young are very weak.

Other crop pests are increased by relatively cool temperatures. Several injurious species of aphids, attacking vegetable, cereal, forage, and cotton crops mainly, may develop more rapidly at temperatures that are low enough to retard the attacks of their natural enemies; this would result in increased damage to many crops. Cooler temperatures favor boll weevil. Hot dry weather, favorable to many pests, will reduce boll weevil damage, as it did in 1944.

Reliance on Weather Not Enough

An early spring, such as occurred this year, often advances the insect hatching season, and contributes to heavy populations. Frequently, it will result in the build-up of larger numbers of some crop pests and will aggravate the season's crop losses. This result can follow even though followed by occasional weeks of cold, freezing, or rainy weather. This is because many insect pests have now emerged earlier from winter quarters, due to premature favorable weather and will grow faster, and multiply more rapidly in continued favorable weather, even though temporarily checked by occasionally adverse conditions.

Another reason for taking special care this season to combat building up

of pest outbreaks, is that adverse weather in many areas, under current insect conditions, cannot be depended on to protect crops from all pests.

Annual Pest Damage Enormous

In fact, surveys and the existing data on annual insect damage show that only rarely, even when pest populations are low, has it been safe to rely on the weather to protect crops. From 1923 to 1943, the combined annual loss of cotton lint and seed resulting from insect damage averaged more than \$145 for each of the Nation's 1,066,000 cotton farms. Cotton pests take over a million tons of cottonseed each year. Despite meat rationing and need for leather, livestock owners make a yearly tribute to screwworms of meat and hides from over 260,000 head. Annually, the hessian fly destroys over 17 million bushels of wheat which could otherwise help feed our soldiers or the starving peoples in liberated countries. And chinch bugs consume more than 15 million dollars worth of corn.

Yearly preventable food loss from truck crops is also very great. After taking actual cabbage crop records in the South, it was found that the cabbage rendered unmarketable by the feeding of cabbage worms on each acre was sufficient to supply 148 persons for 1 year. If marketed, this would make a nice profit for the farmer.

In California, loss of tomatoes by the tomato fruitworm amounted to a half ton of canned tomatoes per acre, which is sufficient to supply 125 persons for 1 year.

In addition to food loss, amounting to some three billion dollars every year, there is the loss of farm labor, fertilizer, insecticides, and other materials used on wasted acres, and the loss of soil fertility on acres now over-used to meet production goals. Better insect control would be instrumental in achieving the same production yields with less labor and better conservation of soil. Year after year, preventable insect damage has been a significant

Insecticide Outlook

SUPPLIES of insecticides, fungicides, and other materials entering into the control of insects and plant diseases will in general be tighter in 1945 than in previous years. This situation is the result of a scarcity of materials going into their manufacture, labor shortages, inadequate supply of containers, and delays in transportation, and reduced carryovers.

The supply picture for most of the standard materials as it now appears follows:

Very tight supplies:

- Nicotine.
- Paradichlorobenzene.
- Paste and dry wettable sulphurs.
- Sodium cyanide.
- Tartar emetic.

Tight supplies:

- Calcium caseinate.
- Copper carbonate.
- Monohydrated copper sulphate.
- Copper oxides.
- Fixed coppers.
- Cresols and phenols.
- Pyrethrum.
- Rotenone.
- Organic sulfur.
- Micronized sulfurs.
- Zinc compounds.

Tight to adequate:

- Copper sulfate.
- Formaldehyde.
- Lead arsenate.
- Paris green.
- Seed protectants.
- Thiocyanates and other chemical extenders.
- Wettable spreaders and stick-ers.

Probably adequate (usually so only if ordered in time):

- Borax.
- Calcium arsenate.
- Calcium cyanide.
- Carbon bisulfide.
- Chloropicrin.
- Cryolite.
- Ethylene dichloride.
- Fish oil soap.
- Liquid HCN.
- Methyl bromide.
- Oil sprays.

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cost factor in production of all major crops.

Another cause of more trouble and losses than usual from crop and livestock pests this season is the expected scarcity of many insecticides.

But there is an adequate amount of calcium arsenate and farmers should have no trouble getting supplies if ordered in advance. Cotton farmers, particularly, cannot depend on hot, dry weather throughout the Cotton Belt to reduce boll-weevil damage this season as they did last year. To be safe, they should order now all the calcium arsenate they will need. Deliveries of insecticides during periods of peak demand—when insecticides are most urgently required—when insects are doing the most damage—are likely to be slow, due to transportation and manufacturing difficulties, complicated by the manpower shortage.

For other insecticides, which are adequate for an average season of careful use, but not as plentiful as calcium arsenate, deliveries should be carefully spaced throughout the season. But farmers will help assure adequate distribution of supplies if they will place orders now for future delivery of insecticide supplies they may need. This will make it more certain that adequate stocks will be on hand locally when required on their farms. If farmers wait to order insecticides until the pests are actually attacking crops in serious numbers it is not likely that deliveries can be made in time.

Farmers should make frequent observations of the increase of insects that attack their crops. This involves making a small sample count of insect pests found in or near cultivated fields each week. For common pests in most localities, this does not take much time or work, if the farmer knows what pests to look for, and how to make quick small-sample observations. 4-H Club boys and girls make weekly observations for local cotton pests. Many farmers who are unfamiliar with local insect pests can quickly learn to recognize the few injurious pests usually present on their farms.

Farmers who keep weekly insect pest records for their own farms have been able to realize large savings not only by increased per acre yields and in better grade products, but in more economical use of pest control materials. Without such records, many farmers cannot know what pests are building up in large numbers to attack their crops. Often they act too late to prevent serious damage that could have been prevented. This season, due to the early spring which has developed unusual insect populations from a high potential, the keeping of a weekly record and the use of insect observations on individual farms is particularly needed to protect crops.

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Rayon Production in Recent Years

FROM a very small production during the last war, world rayon output increased rapidly after 1920 and continued to expand even during the depression. The 1933 output was 60 percent more than in 1929. At the outbreak of the present war in Europe, world production of all types of rayon totaled 2.2 billion pounds, equivalent to about 5 million bales of cotton—

assuming 425 pounds of rayon is equivalent to one 478-pound bale of cotton—and by 1942 rayon production was equal to roughly 8¼ million bales of cotton. Of this amount about

NOTE.—These and other comparisons in terms of raw cotton "equivalents" are in no sense intended to imply a displacement by rayon of the equivalent amount of cotton. For a fuller discussion of this and other aspects of the subject, see *Synthetic Fibers in Relation to American Cotton*, by the authors, which was issued by BAE in January 1945.—Editor.

three-fourths was in areas then under Axis control. This world total compares with a total production in 1920 equivalent to 78 thousand bales and represents an increase from a negligible proportion to the equivalent of nearly one-third of the world's consumption of cotton.

World production of rayon staple fiber was quite small prior to 1931 but by 1939 was equivalent to about one-half of the total production of rayon and by 1942 the estimated production of over 2 billion pounds represented about three-fifths of the total rayon production.

United States Increase Greatest

From 1920 to 1935 production in the United States increased by a greater absolute amount than in any other country and reached 262 million pounds in 1935. During the same period rayon production in the United Kingdom, Germany, Japan, and Italy showed roughly the same general trend, with production in each of these countries increasing up to a level between 120 and 240 million pounds in

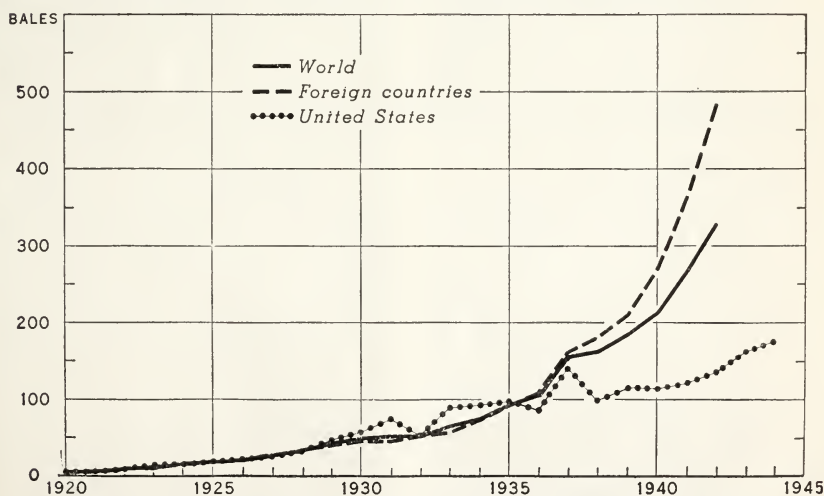
1935. In the late 1930's production in Japan, Germany, and Italy increased under the stimulus of nationalistic policies designed to reduce dependency upon imports of cotton and other fibers as well as to conserve foreign exchange. In 1936 Japan became the world's largest producer only to lose the lead to Germany in 1939.

By 1938 United States was using more rayon than any other fiber except cotton. In 1944 domestic production totaled 724 million pounds, the equivalent of 1.7 million bales of cotton, with rayon staple fiber accounting for 23 percent of the total.

Big Output for Military Tires

During the war much of the increased domestic production has been in high tenacity, high strength rayon for use in military tires. Rayon tire fabric production has jumped from about 7 million pounds in 1939 to between 120 and 130 million pounds in 1944, and is expected to reach 240 million pounds during 1945. Such an output is approximately a fourth more than the annual tire fabric output of all fibers during the five prewar years,

PRODUCTION OF RAYON PER 1,000 BALES OF COTTON CONSUMED, UNITED STATES, FOREIGN COUNTRIES, AND WORLD, 1920-44



RAYON PRODUCTION, CALENDAR YEAR; COTTON CONSUMPTION, CROP YEAR BEGINNING AUGUST, AMERICAN COTTON IN RUNNING BALES, FOREIGN COTTON IN BALES OF 478 LBS. NET, RAYON IN EQUIVALENT BALES OF 425 LBS. NET.

1935-39. This 1945 production is roughly equivalent to 750,000 bales of cotton.

The development of this type of rayon has important implications for the future, with respect to both continuous filament yarn and staple fiber. There are perhaps other technological developments occurring during the war period, in the production of both rayon and other synthetic fibers, which also may be important to synthetic fiber production in the years immediately ahead.

Declining Prices, More Uses

A downward trend in rayon prices, which has been closely associated with the technological improvements in rayon production and increased manufacturing efficiencies, has contributed much to the rapid increases in rayon consumption and to the utilization of rayon for an increasing number of uses. Prices of the heavily used 150 denier viscose filament yarn fell from the all-time peak of \$6 a pound in early 1920 to 49 cents in the summer of 1938. Since then the price has ranged between 51 and 55 cents per pound.

Domestic prices of rayon staple fiber have declined considerably since it first was introduced on a sizable scale in the late 1920's. Quotations for standard type viscose staple fiber declined steadily from 60 cents a pound in each of the crop years 1928-30 to 25 cents a pound in October 1937, and have been at that level or slightly lower since then.

The fact that the price of rayon staple fiber is the same irrespective of staple length places it in sharp contrast with cotton for which prices rise sharply as staple length increases. Furthermore there is somewhat more waste in spinning cotton than rayon staple fiber. On the basis of the price per pound of usable fiber, rayon staple fiber is now priced more advantageously relative to cotton than ever before. In fact, the qualities of cotton most directly in competition with rayon staple fiber from the standpoint of use, currently sell for more than

the latter. Rayon staple fiber also has certain other advantages over cotton among which are (1) greater simplicity of handling in the early stages of yarn manufacturing; (2) freedom from dust; (3) greater price stability and (4) complete uniformity in quality.

Possible Postwar Trends

In view of the sharp upward trend in rayon production and consumption in the past 35 years and the continuing technological improvements of recent years, there seems every reason to expect that the upward trend in synthetic fiber production will continue well into the postwar period and provide tremendous competition for cotton. The annual rate of increase, however, will, no doubt, be very much less in the future than for the 10 years ended 1942, when the average annual percentage increase in total rayon production was 18 and 22 percent, respectively, for the United States and for foreign countries. If the annual average percentage increase following 1942 were only half as great as in the previous 10 years, the United States production of rayon in 1952 would be "equivalent" to 3 million bales of cotton and the total world production would be equal to 22 million bales of cotton. The latter would be only one-fifth less than the 1935-39 average annual world mill consumption of 28½ million bales of raw cotton. Even with a much higher peacetime level of consumer incomes than in the past, it seems improbable that consumers throughout the world could increase their purchases of textiles sufficiently by 1952 to provide outlets for the above quantities of rayon and at the same time provide outlets for a large proportion of the cotton, other natural and synthetic fibers, and paper that could be produced.

Most foreign rayon producing countries were formerly important cotton manufacturing countries importing a large part of their raw cotton requirements. In these countries the production of rayon textiles instead of cotton

textiles permits important savings in foreign exchange. The principal source of cellulose—the basic material for rayon—is wood pulp which is usually available to these countries at costs equivalent to not more than 4 or 5 cents a pound of fiber and often with no expenditure whatever of foreign exchange. Also, countries with well developed chemical industries have available domestically nearly all of the other materials needed in rayon production.

In the event postwar international trade and monetary relations are such that foreign countries are hard-pressed for foreign exchange, the governments of these countries may limit the importation of cotton and other natural fibers and in other ways encourage increased production of rayon and other synthetic fibers. Where unemployment is a problem, the additional labor involved in producing rayon may also give foreign governments an incentive to encourage rayon production and consumption at the expense of cotton which must be imported.

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The trend of rayon production in the United States is also expected to continue upward, but the annual percentage increase also probably will be less than in the past. The same seems to be a reasonable expectation in regard to total domestic synthetic fiber production, even though nylon and some of the other synthetic fibers may expand at a very rapid rate in the years immediately ahead. The actual annual increases are expected to continue relatively large, particularly in the case of staple fiber for which the potential market seems large and where relatively little commercial advantage has been taken of certain recent technological advances such as the development of high strength fiber. The extent of the increase in synthetic fiber production will be influenced by the extent of further technological developments in synthetic fiber manufacture and, particularly in rayon staple fiber and by domestic prices of synthetic fiber, cotton, and wool. To a lesser degree the increases may also be influenced by technological developments in processing and marketing of cotton and wool.

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Wartime Changes in Livestock Numbers

LIVESTOCK numbers began declining last year from the all-time peak reached on January 1, 1944, and by the first of this year were on their way downward to more normal levels. At the 1944 peak the numbers of cattle, hogs, chickens and turkeys were the largest ever reached, but the number of sheep were considerably below the all-time peak of 1942. Horse and mule numbers were, of course, sharply down from their peak reached nearly 30 years ago.

The decline during 1944 was general, with numbers of all species of livestock

at the end of the year smaller than at the beginning. The sharpest relative declines were in hogs, chickens and sheep—horses and mules continued downward at a little faster rate than the average of the last 20 years—while decreases in cattle and turkeys were small—less than 1 percent.

Animal Units

Because of the great differences among the several species of livestock in size and feed requirements the only way these varying changes can be measured in terms of all livestock is to convert the different species to a

common denominator—called an animal unit. In terms of animal units, which allow for these differences in size and feed requirements, the peak of number of January 1, 1944, was equivalent to 104,502,000 units. By January 1, 1945, numbers were down to 98,456,000 units, a decrease of about 6 percent.

In terms of the same units the nearest approach to January 1, 1944, was on January 1, 1918, with 104,233,000 units. While there was a difference between the two years of only about 2 percent in these total units, there was a marked difference in the make-up of the total. In 1918 horses and mules made up 26 percent of the total and meat animals 74 percent. In 1944 horses and mules made up only 13 percent of the total and meat animals 88 percent. In other words a decrease of 48 percent in work animals was accompanied by, and to a large extent made possible, an increase of 18 percent in meat animals.

Horses and Mules

The future of horses and mules on farms at present is not very promising. It is certain that the numbers of each will continue to decline. The growing shortage of manpower on farms during the past 5 years has further encouraged the shift from animal power to mechanical power. The demand for horses and mules has declined, their prices have dropped and breeding is at the lowest level in many decades. The number of horse colts raised in 1944 was 12 percent smaller than in 1943, only about 45 percent as large as in 1937 and probably the smallest in 70 years. Contrary to the general wartime rise of farm product prices the value per head of horses has declined during the past two years, after having advanced sharply during 1943, and on January 1, 1945, was the 6th lowest in 40 years.

In some respects the situation of mules is more favorable than that of horses. Compared with the peak, mule numbers on farms on January 1,

1945, were down about 42 percent while horses were down 58 percent. While the value per head of mules on January 1, 1945, was somewhat below a year earlier it was still more than twice as large as the low of the depression years and was exceeded in only 3 other years.

The demand for mules in the cotton and tobacco States has continued good and numbers in these States have declined only moderately, especially in the South Atlantic and East South Central States. Because these States raise relatively few mule colts, mule numbers have been maintained at the expense of numbers in the States that are the source of replacements. But with the sharp drop in numbers, both of mules of working age and mule colts in these supply States, before many years it may become increasingly difficult to obtain replacements for the Cotton Belt.

Cattle

Cattle numbers continue at a very high level, down only a little from a year earlier, and this despite much the largest yearly slaughter of cattle and calves on record during 1944. Undoubtedly much of the land that was formerly used for producing feed for horses and mules is now being utilized for cattle production. While cattle numbers on January 1, 1945 were about 10 million head larger than in 1919 the total number of cattle, horses and mules was over 4½ million head smaller than in 1919—and was about 3 million head larger than in 1934, the peak of the previous cattle number cycle. But as was evident in 1919 and in 1934, such a level of numbers cannot be maintained in face of short feed production. Even with a drought no more widespread than that of 1919 the cattle industry would be faced with a serious feed problem and a drought as severe as that of 1934 would bring disaster.

The problem facing the cattle industry is how best to reduce numbers to a safer level—both from the stand-

point of feed supplies and from that of possible price declines. It is certain that in no non-war year could a volume of cattle and calves such as was marketed in 1944 have been moved except at very low prices. At best, there is no certainty that such a volume can be marketed after the war, except at much lower prices. But in view of the meat situation in prospect for 1945 it seems probable that a considerably larger volume could be moved at relatively high prices.

Hogs

Hog numbers made the largest drop on record in 1944—down over 23 million head. And the percentage drop between January 1, 1944, and January 1, 1945, of 28 percent was exceeded only in the drought year of 1934. This decline in hog numbers resulted from several conditions—the very tight feed situation during the first half of 1944, the difficulties encountered in getting the record pig crops of 1943 marketed, the rather unfavorable outlook for the 1944 corn crop early in the season, the shortage of competent farm labor, and other wartime difficulties.

The 60,660,000 hogs on farms January 1, 1945, however, was 15 percent larger than the 10-year (1934-43) average and was exceeded in only 4 years since 1930. But this number and the prospective spring pig crop in 1945 promises to be quite inadequate to meet the wartime needs for pork.

Sheep

Conditions associated with or growing out of the war efforts seem to have affected the sheep industry more adversely than any other livestock enterprise. From an all-time peak for numbers of stock sheep reached on January 1, 1942, numbers on farms decreased moderately in 1942 and sharply in 1943 and 1944. January 1, 1945, numbers were down 8½ million head or 15 percent from the 1942 peak and were at the lowest level since 1928. This drop was a direct result of the liquidation of breeding flocks

and was accompanied by record marketing of ewes and ewe lambs.

In the Western Sheep States range operators were particularly hard hit by the growing shortage of experienced labor, the high level of wages, the high cost of supplies and increasing losses from predatory animals. But the tendency to reduce numbers was as marked with growers in the Native Sheep States—especially in the Corn Belt region—as with range operators. The causes of the declines with these producers are less clear. Perhaps many of them felt that the sheep enterprise offered less promising returns than other livestock, getting sheep shorn became increasingly difficult, and with others it may have been a case of having to reduce the work and worry load somewhere and sheep were most readily eliminated.

Reports from farmers indicate that much of the reduction in sheep numbers in the farming States was caused by producers giving up sheep raising entirely, with a noticeable decline in the percentage of farms keeping sheep. With growers everywhere it is probable that the rather unfavorable outlook for wool in the post-war period may have influenced actions.

Chickens

The conditions that caused the drop in chicken numbers were largely the same as those that brought about the reduction in hogs. The relative decline in chickens was much less than with hogs—11 percent as against 28 percent—but the number on January 1, 1945, compared with the 10-year, 1934-43 average number was about the same with both—118 percent with chickens and 115 percent with hogs. With a greatly improved feed situation, compared with a year ago and a materially better condition as regards storage together with a record demand for eggs and chicken meat the outlook for the chicken and egg producer is quite different.

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How the Corn Crop is Harvested

METHODS of harvesting corn, the Nation's leading crop, are many and varied, depending largely on how the product is to be used and on how the land is to be used the following year. In addition, the acreage of corn per farm, the kind and quantity of labor available, and the relative harvesting costs are important factors which determine the practices and machines used.

Huge wartime crops of corn, together with critical labor shortages, have necessitated changes in the processes of harvesting the crops. The shifts have been chiefly toward those practices which would allow for harvesting of silage as well as an increased production of corn for grain with a minimum amount of labor. Some shift from cutting and shocking to harvesting from the standing stalk has also taken place.

The use of machines for harvesting corn has been stepped up under wartime conditions. Both skill and physical strength are necessary for harvesting by hand methods, but large numbers of younger men, the more efficient harvest workers, have left the farm either for the armed forces or for wartime industries. Shortages of labor for corn harvesting have been widespread. And the shortages have been felt most keenly in the Corn Belt and the more humid areas of the Great Plains where corn acreages per farm are large and where the per-acre corn yield is usually above the national average.

This labor problem would have been even more pronounced but for the relatively large output of corn pickers since 1942. From about 130,000 on January 1, 1942, the number of corn

pickers had increased by nearly 30 percent, to about 168,000 on January 1, 1945. Increasing their use by expanding the acreages per machine, often by doing custom work, has also been an important factor in getting the work done both quickly and economically.

Harvesting from Standing Stalk Leads

A Nation-wide study shows that more than 75 percent of the 1943 corn acreage was picked, husked or snapped from the standing stalk, either by hand or with the field corn picker. This is the lowest-cost harvest method when the corn is to be stored, and requires less labor than any other method except hogging and grazing. Harvesting from the standing stalk has long been the leading method in the central and western Corn Belt, where the storing of corn roughage for winter feed has not been important, as well as in the South where often the corn leaves and tops are saved for forage. Harvesting from the standing stalk has become of increased importance in the eastern Corn Belt and other eastern areas in recent years, largely because of the increased use of pickers and farm labor shortages.

More than 90 percent of the 1943 corn acreage of Iowa and Illinois, Texas, Louisiana, Mississippi, Alabama, and South Carolina was handled in this manner. Harvesting from the standing stalk was also above the national average in Indiana, Nebraska, Kansas, and some Southern States.

Hand methods continue to dominate in the harvesting of corn. Slightly more than half of the total 1943 corn acreage was husked, or snapped by hand from the standing stalk. This method was employed on more than 90 percent of all corn acreage in Oklahoma, Texas, and the Delta States, and on over 50 percent of the corn acreage in the Great Plains and Southeastern

NOTE.—A fuller discussion of corn harvesting methods will be found in *Harvesting the Corn Crop*, by the authors, which was recently issued by BAE.—Editor.

States. On Corn Belt farms having less than 55 acres of corn, harvesting from the standing stalk by hand was the leading method.

Mechanical Pickers Harvest a Fourth

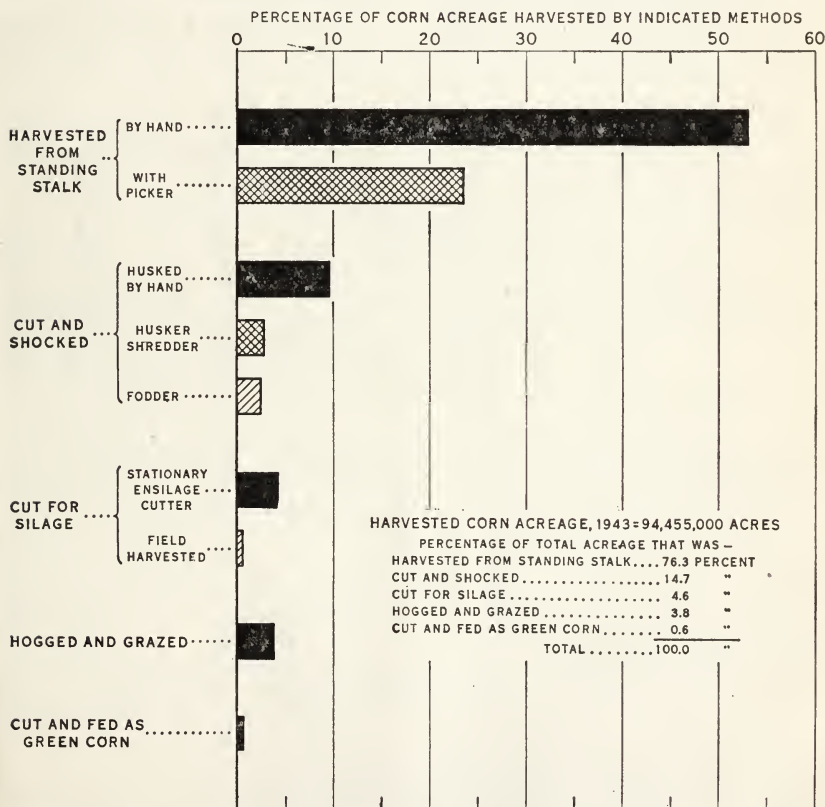
More than 23 percent of the country's corn acreage in 1943 was harvested with mechanical field pickers. Acreage harvested with the corn picker more than doubled from 1938 to 1943. Along with the increase in picker use there has been an increase in numbers of corn pickers but harvesting more acres per picker has been a chief factor. In 1944 there were at least 10 percent more pickers on farms than in 1943 and further increases are expected.

Although the use of corn pickers is

becoming widespread, they are used extensively only in the Corn Belt, the Lake States, and in humid areas of the Great Plains, where the corn acreage per farm is large and the per-acre corn yield much above the national average. Thus, in 1943, when less than one-fourth of the acreage was harvested with corn pickers, it is estimated that corn pickers harvested at least one-third of the total production of all corn. The quantity of corn picked by machine was equivalent to 38 percent of all corn harvested for grain.

Under favorable conditions the corn picker is a relatively low cost method of harvesting. Use of a two-row picker often effects a labor saving amounting to 50 percent or more, as compared with harvesting by hand from the

CORN HARVESTING METHODS, UNITED STATES, 1943 CROP



standing stalk. The use of the corn picker has been steadily increasing since the late 1920's when tractor power take-off machines became important. Increased plantings of relatively storm-resistant hybrids have also been an important factor favoring the increased use of corn pickers.

Small Percentage Shocked

Only about 15 percent of the 1943 corn acreage was cut and shocked. Of all corn cut and shocked, 65 percent was later harvested by husking or snapping by hand, about 20 percent was harvested for grain with the husker shredder, while the remainder was fed as fodder corn, from which ears were not removed. However, all areas of the country reported some cutting and shocking of corn, but it was most important in the upper Ohio and Tennessee Valleys, the Potomac Valley, along the Great Lakes, and in the subhumid corn producing areas of

the Great Plains and Mountain States. And in many parts of the East Central region more than three-fourths of the 1943 corn acreage was cut and shocked.

In the South and East, nearly all of the corn cut and shocked was husked or snapped by hand. Use of the husker shredder was reported in many States, but only in Ohio, Michigan, and Wisconsin did the husker-shredder account for an appreciable part of the corn acreage. Feeding of fodder corn was relatively most important in the Northern Great Plains and Mountain States, where sub-humid conditions keep the per acre corn yield below average, and in the Pacific States. In practically all areas farmers with small corn acreages cut and shocked higher proportions of their acreage than did farmers with large acreages.

Very Little Pastured

The 1943 survey shows that less than 1 percent of the corn acreage was

Corn Harvesting Methods and Utilization, by Regions, 1943

Regions	Corn harvested in 1943	Proportion of 1943 corn acreage ¹							Leaves stripped or topped for forage ³	Proportion of all corn cut which was cut by hand ⁴
		Harvested from standing stalk		Cut and shocked		Cut and fed green	Hogged and grazed	Cut for silage		
		With mechanical field picker	By hand	Ears husked or snapped ²	Fed as fodder, ears not removed					
Northeast: New Eng., N. Y., N. J., Pa., Del., Md.	1,000 acres 2,897	Per cent 5.8	Per cent 16.7	Per cent 41.5	Per cent 2.3	Per cent 1.4	Per cent 0.5	Per cent 31.8	Per cent 1.4	Per cent 46.6
Corn Belt: Ohio, Ind., Ill., Iowa, Mo.	31,420	48.2	35.0	11.2	1.0	.2	2.4	2.0	.2	51.1
Lake States: Mich., Wis., Minn.	9,252	34.4	16.0	19.3	5.5	.9	3.1	20.8	.6	13.5
Great Plains: N. D., S. D., Nebr., Kans.	16,667	20.2	59.2	2.3	4.5	.6	10.3	2.9	.2	10.9
Appalachian: W. Va., Ky., Tenn.	6,021	1.2	51.3	44.6	.5	.3	1.2	.9	2.8	93.0
Southeast: Va., N. C., S. C., Ga., Fla., Ala.	12,986	.3	83.2	12.5	.8	.8	1.5	.9	15.6	92.7
Del'a States: Miss., Ark., La.	6,181	.2	90.1	5.7	1.3	1.1	1.4	.2	7.0	92.8
Oklahoma-Texas	7,394	1.2	91.9	2.7	1.3	.9	1.5	.5	10.8	47.0
Mountain: Mont., Idaho, Wyo., Colo., Utah, Nev., N. M., Ariz.	1,480	6.1	48.9	7.1	9.1	.5	20.0	8.3	.6	22.8
Pacific Coast: Wash., Oreg., Calif.	155	6.3	38.2	5.2	7.8	4.5	6.4	31.6	.5	57.9
United States	94,455	23.5	52.8	12.5	2.2	.6	3.8	4.6	3.8	49.3

¹ The sum of the percentages in the 7 columns below is 100 percent for each line.

² Includes husked or snapped by hand and with husker-shredder.

³ Acreage from which leaves were stripped or pulled and from which tops were cut. Later the grain is usually harvested from standing stalk. The percentages are duplicated in preceding columns.

⁴ Includes corn cut and shocked, cut and fed green and cut for silage. Complementary percentage harvested by machine.

cut and fed green. Corn fed in this manner is principally for supplementing pastures in the late summer and is mostly utilized by cattle, although some is also fed to hogs and workstock. Feeding of green corn is a minor form of utilization in the major corn States. It is relatively most important in the cotton-growing areas and the Western States and also along the northern fringe of the country where the growing season is often too short to permit complete maturity of the crop.

Harvesting corn by hogging or by grazing requires less labor than does any other harvest method. This method was used to harvest less than 4 percent of the 1943 acreage. Although hogging or grazing was reported to some extent in all areas it was relatively most important in the subhumid areas, in some of which more than one-third of the 1943 acreage was so handled. Some corn was hogged or grazed throughout the humid corn area and the practice was fairly important in the central Corn Belt. In the humid areas the hogged or grazed acreage is utilized chiefly by hogs; in the subhumid areas, by cattle. For most areas there was a tendency for farmers with large corn acreages per farm to hog or graze a higher proportion of their acreage than did farmers with small acreages.

Silage Chiefly in Dairy Areas

Cutting corn for silage was reported in all parts of the country, but this use accounted for less than 5 percent of the 1943 corn acreage. It was relatively most important in the Northeast, the Lake States, and the Pacific Coast, where dairy cow numbers are concentrated. In some of these areas more than half of the 1943 corn acreage was cut for silage. In the South only a few areas reported using as much as 2 percent of the 1943 acreage for silage. The field harvester was used on less than one-tenth of the silage acreage, mostly on farms of large corn acreage.

Saving only a part of the corn plant for forage, either by removing the tops or by pulling or stripping the leaves, was reported to a considerable extent in the southern areas. For the entire country forage was either topped, pulled or stripped from about 3,600,000 acres. From practically all of this acreage the ears were later harvested from the standing stalk by husking or snapping. Topping or stripping corn for forage was of little importance in northern and western corn areas.

About 19 million acres of corn were cut in 1943. This figure includes that cut for silage, all that was cut and shocked and corn cut and fed green. It does not include the 3.6 million acres of corn topped or stripped for forage. For the entire country, of all corn cut slightly more than half of the acreage was cut with machines. Machine cutting of corn, usually with corn binders, but including field harvesters, cutting sleds, etc., predominated in the Great Plains, the western Corn Belt, the New England States, New York, Colorado, and Wyoming. In contrast, hand methods predominated in all Southern States, eastern Corn Belt, Appalachian States, and some of the Northeastern States.

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Planning the Farm for Profit and Stability. Neil W. Johnson. U. S. Dept. Agr. Farmers' Bulletin 1965, 30 pp. Washington. February 1945.

Makes use of the farm budgeting process and reflects some of the thinking on farm planning that has developed in recent years.

The Farm Real Estate Situation, 1943-44. M. M. Regan, A. R. Johnson, and Fred A. Clarenbach. U. S. Dept. Agr. Cir. 721, 45 pp. Washington. January 1945.

In 1943-44, land values rose at an average rate of 1¾ percent a month, volume of sale was at record high, resales of farms after a limited period of ownership increased, and farmers continued to buy more land than they sold. Amount of outstanding farm mortgages declined further. Heavy debts developed on significant number of farms as result of sale.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) ¹	Income of industrial workers (1935-39 =100) ²	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities ³	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live stock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	106	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944-April.....	239	327	152	175	169	292	196	151	203	191
May.....	237	327	152	175	169	-----	194	153	201	190
June.....	235	327	152	176	170	-----	192	154	200	189
July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	194
September.....	231	320	152	176	170	-----	198	179	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	322	153	179	172	324	202	199	203	202
February.....	235	321	154	179	172	-----	200	183	209	201
March.....	-----	-----	154	180	173	-----	198	175	211	200
April.....	-----	-----	-----	180	173	335	194	176	215	201

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio ⁵
	Crops							All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops		
1910-14 average.....	100	101	102	96	98	99	-----	99	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162
1920-24 average.....	147	126	192	189	149	148	143	160	151
1925-29 average.....	140	119	172	145	129	141	140	143	149
1930-34 average.....	70	76	119	74	72	94	106	86	90
1935-39 average.....	94	95	175	83	106	83	102	97	107
1941.....	97	89	159	107	130	85	129	106	124
1942.....	120	111	252	149	172	114	163	142	159
1943.....	148	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944-April.....	171	172	352	163	207	237	220	200	196
May.....	170	173	350	160	208	232	225	198	194
June.....	165	170	350	163	210	228	231	197	193
July.....	161	168	350	164	209	230	195	194	192
August.....	156	166	355	162	209	214	186	191	193
September.....	155	162	358	170	207	206	166	188	192
October.....	164	161	357	171	211	205	153	187	194
November.....	165	157	368	168	215	195	188	189	196
December.....	167	160	364	168	215	206	228	196	200
1945-January.....	169	163	365	163	214	205	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	203	196	198
April.....	172	162	362	163	215	221	259	204	203

¹ Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

² Total income, adjusted for seasonal variation, revised February 1945.

³ Bureau of Labor Statistics.

⁴ Revised.

⁵ Ratio of prices received by farmers to prices paid, interest, and taxes.

⁶ 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.